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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

MAY 4, 1918

REPORT FOR WEEK ENDING MAY 4, 1918.
(Except where otherwise indicated).

Amarillo:

No significant change has come about in climatic conditions here for the past month. Temperatures continue abnormally low and with the absence of precipitation, the wheat and oats crop are mainly marking time. The leaves are more or less withered and give evidence of being wind whipped. Corn was planted on May 1st, to see what luck we might have with an early planting of this crop. However unless it rains, it will not come up. Weeds as yet are giving us very little trouble. The Dry Land plats are gone over about every ten days to kill off small weeds just starting on plats intended for the row crops. Trees on the station have now fairly well leafed out.

A Summary Study is being made of the cropping and rotation work as this has been conducted for Dry Land work at the station since 1916. This having mainly been superseded by new plans initialed with this season, the study is intended as a sort of wind up of the original work.

Weather for the week was -- maximum temperature, 75 on May 2nd; minimum, 32 on April 29th; hourly wind 8.8 miles; evaporation, 1.792 in.; precipitation, .12 in yesterday.

April Climatic Summary -- Ave.max.temp., 66; ave. min.temp., 36; Mean ave., 51; The Average temperature conditions for April were exactly the same as for March, or about 4 degrees lower than the April normal.

Hourly wind velocity was 10.4 miles or about one mile above the station normal.

Precipitation was .48",which is 1.25" below the station normal for the month. There has been 1.76 in. precipitation since the first of the year which leaves us short 1.33 in. of the normal average for the first four months.

Evaporation was 6.889 inches which is nearly normal for April.

Vapor pressure averaged .163 or about .050 below normal the same as last year.

Archer:

The entire week has been suitable for field work. The plats were staked out, the seed beds prepared with disc and harrow, and the plats of oats, barley and peas for green manure seeded. The spring wheat will be seeded the first of next week. The fall plowed plats were put in very good condition with the harrow; but they were double disced just before seeding to prevent weed growth. It has been fair and warm except the first two days of the week, and a quick germination should take place. The spring rye seeded on April 10th is up and making a good growth the past few days. Brome grass, alfalfa and the range grasses have made a fair growth.

There has been no rain and little wind this week; the average wind velocity was 8.5 miles per hour. Maximum temperature, 74 on the 4th; minimum, 21 on April 28th; means 58 and 32. Evaporation since April 28, 1.15".

Big Spring:

Most of the week has been cool and cloudy with showery weather toward the latter part of the week. Max.temp.,90; min.,41;prec., .77 in.;wind

Big Spring, con'd:

velocity, 7.1 miles per hour; evap., 2.36 inches. The above rain is the most received any month this year, and while it will do a great deal of good, it is too light to insure planting of crops, on account of the dry soil below. An examination shows that the soil is only wet to a depth of four or five inches.

The rains received were general and covered a large district of the western part of Texas. It is hoped that it is the beginning of the breaking up of the drouth.

Colby:

Much warmer weather this week than during any previous week this season. All crops have begun to make considerable headway. Rye is almost a foot high and wheat is jointing. The spring grains and alfalfa are growing rapidly. So far there has been no lack of moisture. Corn planting is under way in the county. That on the D. L. A. Plats will be planted Monday.

Weather for the week:- Max.Temp.,81; min.,25; prec., T,;prec. for April, 1.05", average 2.17", 1917 1.66".

Dalhart:

The weather continues cold, windy and so disagreeable that it has only been possible to spend a little more than half of the time at field work. General farm work in the community is progressing as rapidly as the weather will permit and the indications are that there will be a considerable acreage increase this season. Labor scarcity seems to be the limiting factor in crop production this spring. The total amount of precipitation which fell in April was .87 inches, which is considerably below the average for the month, but as there was considerable precipitation in March, there is plenty of moisture for preparing the soil for seeding.

Maximum temperature for the week, 76; min., 31; prec., .05.

Havre:

Growing conditions during the week have been very favorable with temperatures above normal, especially the minimum. The afternoon periods have been very windy and on two days these winds were warm.

All small grains are coming through the ground with good stands. This is the earliest date that the grain has been up since the station has been established. Flax was seeded on the 30th and is nearly through the ground now. Varieties of field peas, grains for hay and the different grasses were seeded on the area devoted to the forage crop investigations. Trees, for replanting in the shelter-belt where there are dead ones, were received during the week and the most of the work is now completed. The most of the trees that are dead were killed last summer.

Breaking for flax was completed yesterday. We have about 70 acres of sod to work down into a seed bed for this crop. Flax is generally seeded in this locality at present.

Max.temp.,84;min.,30; no prec.; evap.,for Apr, 4.459;prec., .44.

Huntley:

Weather throughout the week has been unusually warm and crops have made a good growth. Spring wheat and peas are all up and on a few plats oats and barley are beginning to come through. Early and medium early vegetables were seeded in the dry-land garden during the week and ground was prepared for planting the potatoe varieties. Plowing and discing for corn is now in progress.

Fall pigs were placed on the brome-grass pastures early in the week. Because of the scarcity of animals available for this work, the pastures were cut down to 1/2acre each. The hogs used are pure bred Duroc Jerseys raised at the Experiment Farm. They averaged 97 pounds and are of very good type for grazing purposes. The lots are apportioned at the rate of 8 hogs per acre.

Temperatures for the week: Max., 87; min., 27; prec., none.

Judith Basin, report for week ending April 27th:

Cool weather has continued here, the thermometer rising above 50 degrees on only two days last week. Discing and harrowing were retarded during part of the day by frozen ground on several occasions. Maximum temperature for week, 63; min., 16; prec., .08"; evap., .446".

Plowing and discing is still in progress on the rotations, but will be finished in a few days, and seeding will immediately follow.

A few hours work Monday will complete the concrete work on the cistern and tank house. The cistern is divided into two parts, one for well water and the other for rain water. It will have a capacity of 25,000 gals.

Spring seeding is in full progress in the Judith Basin. There does not seem to be any marked shortage of labor.

Judith Basin:

Warm sunny weather has prevailed during the past week, making conditions ideal for field work. A good rain would benefit winter wheat and all spring crops that are planted. The precipitation for April (.45") was the lowest recorded for that month since the station was established in 1908. The average April precipitation for the past twenty years id 1.28 in. However crops have not yet been damaged by a lack of water, as moist dirt is found a few inches below the surface. Maximum temperature for week, 79; minimum, 25; evap., 1.337"; prec., .12".

All rotation plats have been seeded, with the exception of those to be sown to sod crops. Grains on the cereal variety testing plats came up a week after being planted and good stands have been secured.

At this time it does not appear that any of the winter wheat plats in the rotations will require reseeding. However winter killing has reduced the stand to 50 or 60% in some cases. Farmers in general are optimistic over the chances for a good wheat crop in the Judith Basin this year. Reseeding to spring wheat will be necessary in comparatively few instances.

The concrete work on the cistern was finished in the early part of the week and Mr. J. D. Kelso, who has been superintending the work, returned to Ardmore.

Lawton:

Cool weather has continued during the last two weeks. A minimum temperature of 39 was recorded twice during this period and the maximum temperature has ranged from 54 to 85. Threatening clouds and other indications of rain have obtained for the last two days. Moisture that fell during the latter part of March and the first part of April has been rapidly depleted by all the small grain crops. The lack of moisture and the plentifull supply of chinch bugs are causing the small grain crops to suffer very noticeably. A general complaint of yellow spots and dead leaves on most of the plants in the field seems to be prevailent among nearly all the farmers. It is believed that the chinch bugs are responsible for their share of the damage. They are very numerous on all of the small grain plats on the [illegible] station and this does not look very promising for the rowed crops that will follow later.

Corn was cultivated on the 2nd. All of the fallow plats were plowed and harrowed on the 1st of May.

A good stand of Kafir, Milo, Sumac and Red Amber was secured on the date of planting test made the 19th of April. Cotton planted at the rate of 24 and 32 pounds per acre on the same date came up well. The rate of 16 lbs.per acre seemed to be emerging rather slowly.

All small grain plats are being trimmed at the present time.

Mandan:

Horticulture.

Some additional replanting was done in the species testing blocks and in the 1916 and the 1917 shelterbelt combinations.

Six thousand fruit stocks and other miscellaneous seedlings and cuttings were planted in the 1918 nursery.

Fruit seeds, such as choke cherries, viburnums, crataegus, etc,, are coming up very satisfactorily in the seed beds.

Juneberries, gooseberries and plums have started blossoming.

The planting of the "Self-protecting Combination Fruit Patch" of ,7 of an acre has almost been completed. This is located on the north half of field "Eye" VIII.

Eleven groups of plums and ten of apples were planted according to the "group orchard system". Each groups consists of five five trees.

Fifty 4-year old apple trees, 5-7 feet were planted according to the "heeling" in system of planting.

In the greenhouse 10,000 hybrid tomato seedlings have been transplanted for the last time before setting out into the field the latter part of this month.

A considerable area of new lawn was seeded on the grounds.

Some ripe cherries were picked in the greenhouse May 1. These are hybrids between the Dyehouse and Prunus tomentosa. Juneberries crossed with pears are also ripening.

A thousand each of 3-year old wealthy apple seedlings and Prunus besseyii (native), as well as a good assortment of other fruit seedlings were planted in the seedling testing blocks.

Soil moisture work was continued all week and the shelterbelt combination samplings have just about been completed.

Mandan, con'd:

Cultivation has been continued all week and practically all horticultural plantings have been gone over once.

Agronomy.

Flax was seeded on the rotations during the week. The flax varieties and rate of seeding tests were seeded for the Office of Cereal Investigations. The flax nursery is being seeded today.

About ten acres of barley was seeded for horse feed on land that was not to be used for other work this season.

Soil samples were repeated on the H. G. Wheat Series and in the flax rotations.

Small grain has made rapid progress during the week, and the fields now appear green.

Max.temp., 80; min., 27; prec., 6/10th in.

Cooperative Grazing Experiment.

Soil samples were taken in the various pastures the past week.

Some small areas have been seeded to alfalfam brome grass, etc., on native sod, both with and without discing. These are trials to determine the possibility of thicking and improving the native pastures.

Seventy-five head of cattle arrived during the week for the grazing experiment. They are now on the reserve pasture and will be divided and put into the various pastures the coming week.

Mr. W. H. Peters, Animal Husbandman, of the North Dakota Agricultural College was here during the week. He secured one car of the seventy-five head of cattle in Montana and one car near Dickinson.

Arboriculture.

The shipping of stock to cooperators was finished Monday.

All of the conifer seedlings from the Forest Service have now been planted and number as follows: Scotch Pine, 25,900; Western Yellow Pine, 72,980; and Jack Pine, 21,320: a total of 120,200.

Planting of tree seed and cuttings was begun Tuesday and up to Friday night ab ut 17,200 willow cuttings have been planted as well as an acre of ash, box-elder and Gunnela Maple seed.

North Platte:

Clear skies and higher temperatures since May 1, following the moisture of the last two weeks of April, have made excellent growing conditions. The condition of all grain crops has improved remarkably.

March and April weather conditions at this station furnish an interesting contrast. The absolute maximum temperature for March was 80 degrees and for April 70. In March the maximum temperature reached 70 degrees or more in 12 days. In April 70 degrees was reached but once. The mean temperature for March was 45 degrees while that of April was but 43.

North Platte, cont'd:

The only respect in which the March temperature was colder than April was in lower minimum temperature. The absolute minimum for March was 15 degrees and the minimum went below 30 on 17 days. The absolute minimum for April was 25 and the minimum went below 30 on but 10 days.

The April precipitation was 2.61 inches which brings the precipitation for the year to date to .46 inches above normal.

Potatoes were planted on the rotation plats during the week. Corn will be planted the coming week if the weather remains favorable.

Sheridan:

The past week has been favorable for field work, with not a sign of unfavorable weather. The following conditions obtained. Max., 81 on the 4th; min., 15 on the 27th; prec., .10; ave. wind vel., 5.7; evap., .666.

During the month of April there was precipitation amounting to 2.89 inches, of which we have record, and we feel certain that there was possibly .50 which came in the form of snow, and drifted over the rain guage. The normal is 1.50 inches.

Land was prepared and seeded on the rotations for wheat, oats, barley, peas, alfalfa, brome grass and sweet clover. No corn land has yet been prepared.

Preparation of the forage field for seeding is nearly finished, the garden is plowed and worked down, and plowing started on a 10 acre field of corn.

Soil sampling has been started, and the first round will be finished in 2 days. We find the soil saturated to a depth of between 4 and 5 feet. The rotation field being very heavy soil, could not be prepared for early spring crops as we wished to do it. It turned over badly and worked up poorly.

All of the varieties and dates of seeding on the Cereal field are up today. We have accomplished more in the field the past week than during the whole of the month of April.

Grass on the hills and pastures is growing very fast, and cattle men are starting the cattle for the range.

the 1400 miles of road in this county have been the worst this spring that was ever known, according to the old settlers. However they are drying up fast now.

There is considerable wheat still on the farms here, but it cannot be marketed until the spring crops are in.

Tucumcari:

Moving of household goods was the principal task of the week. The superintendent's effects were moved on to the station; and we also changed teamsters during the week. In addition to this work some plowing was done on the sorghum variety field and one of the hog pasture experimental lots was plowed. One of the wind mills was taken down and some much needed repairs made. Temperatures have been favorable for plant growth and weeds are making a rapid growth. Many of the peaches and plums in the station orchard escaped the numerous frosts we had a short time back, and are now doing nicely.

Tucumcari, cont'd:

Maximum temperature for week, 73; min., 38; ave.wind vel, 7.2 miles; evap., 1.961"; prec., .07"; prevailing wind, S.W.; character of sky, Clear.

Woodward:

The field work done during the week has been of a miscellaneous character. Some plowing and cultivating have been done. The second date of the rate-and-date experiment of the Cereal Office was planted this week. If the weather permits, we will probably get all of our planting done by the end of next week, except the last two dates of the cotton in the co-operative experiment. There is a little plowing yet to be done on the rotations before planting, but this will not take over a day.

The wheat is looking good for the county altho there are a few fields that are short. The best wheat on the station is about 20 inches high, the rye is about the same, possibly a little higher. The poorest wheat on the station is about 4 inches high. That on the rotations is the worst wheat we have. The alfalfa that was planted some time ago is up to a fair stand at this time.

Weather report: max.temp., 78; min., 34; ave. hourly wind vel., 8.4 miles; evap., 1.712 inches. A good rain would be greatly appreciated at this time. The crops are not suffering yet but the wheat ground is getting pretty dry, other fields have plenty of moisture.

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WEEKLY STATION REPORTS

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DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

MAY 11

REPORT FOR WEEK ENDING MAY 11, 1918.
(Except where otherwise indicated)

Amarillo:

Another blank was drawn on the weather this week, no precipitation having yet come to relieve the situation which is steadily becoming more serious. Violent ranges in temperature, high winds and evaporation, characteristic of drouth conditions, have prevailed. Maximum temperature was 96 on the 8th. Minimum, 35 on the 10th -- the range thus being 61 degrees within two days. Hourly wind velocity averaged 11.9 miles -- that for the 8th. being 16.8 miles. Precipitation was .09 inch on the 4th. Evaporation was 2.540 inches. Crops are making practically no growth and it will be useless to plant row crops until it rains. Field wrok is pretty much at a standstill. A few bold weeds of the desert type that have put forth leaf, flower and fruiting buds, have been cut down with the hoe. The ordinary weeds, like the Amaranthus and Russian thistle have so far been easily kept in check with the harrow. The range is in poor condition and cattlemen are much worried. Altogether the oultook for this portion of the Panhandle will continue discourageous we have rain in copious quantities.

Archer:

The spring wheat was seeded in the D. L. A. plats the first of the week; and seven plats were plowed for corn. Soil samples were taken on the M. C. spring wheat plats; and they show that the depth to which the moisture has penetrated varies very much. Plats left in stubble over winter show a higher moisture content than those fall plowed.

A strong wind and a $2\frac{1}{2}$ inch snow storm has hindered field work the last two or three days of the week, but it seems promising of fair weather for next week. Maximum temperature, 75 on the 5th; minimum, 26 on the 10th; means 64 and 37. Precipitation, 0.38 inches; evaporation, 0.973 inches; wind velocity, 9.4 miles per hour.

Big Spring:

During the week we have experienced the warmest weather of any period this spring. Maximum temperature, 98; minimum, 49; wind velocity, 9.4 miles; evaporation, 2.36 inches; precipitation, 0.

The showers received the previous week wet the soil sufficiently so the balance of the spring plowing could be done, though not enough to warrant the planting of crops. All the fall plowed plats were worked down with the disc to kill the weeds and put them in condition for planting when more moisture is received. The grass on the range is getting green where it is not covered with drifted soil, and with more rain soon, the range conditions in this section would be much improved.

The station was visited during the week by two of the district agents connected with the extension service of the Texas A & M College. As this

Big Spring, cont'd:

was their first visit to this station and section, they displayed considerable interest in the work carried on at the station.

Bellefourche:

All of the small grains have now emerged and are growing nicely. Spring wheat is in a more advanced stage of growth than is winter wheat. An excellent stand was secured on all grain plats.

Potatoes were planted early in the week and all the plats where corn is to be planted were worked down into good condition for planting. The plats that are to be fallow this season were plowed during the week.

A rain of .76 in. during the week mellowed the soil on the spring plowed plats, so that they could be worked down into fairly good condition.

The soil is now saturated with moisture to a depth of two feet.

Colby:

This has been a week of varied weather. The first days were warm and almost ideal for growing crops but the last three days have been cold, windy, and dusty. Thursday a high wind from the northwest, averaging about 38 mi. during thedday, caused considerable soil blowing on bare fields. A frost that night killed a large percentage of the thistles which had survived previous frosts and nipped some of the early garden truck and fruit which was in blossom. Today it is raining, a light steady shower.

Corn on the D. L. A. plats was planted Monday. Today the milo and kafir was prepared for seeding, which will be done the week of the 20th, if possible. The ground was sticky on the M. C. A. plats of milo and kafir when they were plowed this morning. All small grains have grown considerably during the week.

Weather for the week:- max.temp., 90; min., 28; ave. hourly wind vel., (2') 9.3 mi.;(8') 13.5 mi.; evaporation, 1.776", precipitation, .01, not including today's.

Dalhart:

There has been no precipitation of any value since April 9th, and the soil is rapidly drying out. Several of the plots have been prepared for seeding, with the intention that this work be started next week, but if the weather continues it is doubtfull if the seeding can be done until we get some more moisture. There has been considerable wind movement during the week, which has been accompanied by wide variations in temperatures and high evaporation. While this extremely varied weather has but little, if any effect, upon the crop production, beyond the loss of some moisture by evaporation, it makes field work very disagreeable and makes it rather uncertain as to just what field work had best be done under conditions as they exist.

Maximum temperature for the week, 99; minimum, 33, precipitation, none, maximum wind velocity, 16 miles per hour.

Garden City; report for two weeks ending May 11:

The weather for the past two weeks, with the exception of two days the first part of the week, has been quite cool for this time of the year. The two days noted were real summer days, a maximum of 95 being recorded. The following day was cold and very windy, a wind velocity of twenty four miles per hour for the twenty-four hour period being recorded on the 8' anemometer.

The small grain is beginning to fire and a good rain is needed.

Spring plowing, with the exception of "A" plats of the HC series, was completed during the week. Alley ways between plats of small grain were cultivated and cultivation begun on fall worked plats to kill growth of Russian thistle.

Professor L. E. Call, acting director of Kansas experiment stations, was a station visitor on the 3rd and 4th.

Maximum temperature, 95; minimum, 26; evaporation, 4.284"; precipitation, .11"; wind velocity on 8' anemometer, 15.0 miles; 2' anemometer, 10.1 miles per hour.

Havre:

The past five days have been very windy with temperatures below normal for this season. Grains however are growing and the roots seem developed so that there is little danger of the plants being killed by immediate dry weather. Tuesday and Wednesday were cloudy with indications of rain, but none fell.

Flax on the rotations is thru the ground on a part of the plats. That on spring plowing is the poorest at present and if the present dry windy conditions prevail much longer, many of the plats will likely dry out and dry. That on corn ground and in fact all other methods, with the exception of spring plowing, is looking good.

The replanting in the shelterbelt was completed during the week. Planting of potatoes and the plowing for corn on the rotations was also completed on the 11th.

Max. temp., 83 on the 5th; min., 31 on the 9th; prec., T.

Hays:

A very heavy dashing rain (.96 inches) late in the afternoon of May 7th, beat down and packed the surface of all fallow plats and plats prepared for the planting of row crops. Considerable of the water was lost by run-off. However, the ground, so far as the surface is concerned, contained plenty of moisture without this rain. Some hail accompanied the rain, but did no damage of consequence. Even the young alfalfa survived the heavy storm, but the ground was left in a very bad condition for withstanding wind. Early in the morning of the 9th, less than forty-eight after the heavy rain, and before the surface of the ground was dry enough to cultivate well, a very heavy wind from the northwest came up, and by noon soil was moving rapidly from most smooth surface fields not in small grain. Most fallow plats, and row crop plats, having been "slicked" by the rain

Hays, cont'd:

commenced blowing so it was necessary to cultivate to arrest the soil movement. The conditions became so severe that it was necessary to cultivate up the young alfalfa in Rotation 142 to prevent it destroying the adjoining small grain plats.

But little permanent damage was done the small grain plats, although these crops do at present bear the marks of having been throughly "sand papered".

Winter wheat is about 12 inches high and very rank growth except on the poorer methods of seedbed preparation. Spring wheat, oats and barley about 5 inches, high, peas about 6 inches, and all looking good.

Alfalfa plats reseeded and corn planted today.

During the latter part of the week there was a three days meeting and conference at the station of the District and County Agricultural agents from the weatern part of the state. About 20 visitors were present. Today and tomorrow a class of students , under Professors Throckmorton and Grimes from the Kansas State Agricultural College, are inspecting the Station and surrounding community studying soils and farm management.

Hettinger:

Crops are in good condition. All small grains are up and look to be in an excellent condition. Soil is a little dry at present. Mr. Mahnke is now plowing Dry Land plats for corn, and has been doing general farm work the past week.

Max. temp., 76; min., 35; prec., 0.

Huntley:

On the rotations spring plowing and discing for corn was completed and some of the plats were harrowed.

Hogs were placed on the alfalfa pastures and on the rye plat of rotation 652. For the rye pasture a very uniform lot of ten pure bred Duroc Jerseys fall pigs were used. These hogs had an average initial weight of 97 pounds. The broadcast plat of alfalfa was stocked at the rate of eight hogs per acre. The animals used were grade and pure bred Duroc Jerseys having an average weight of 86 pounds. Because of the rather thin stand and slow growth of the alfalfa sown in rows, the row plat received only six hogs per acre. These were similar in type to the lot on the broadcast plat and had an initial weight of 88 pounds.

Field work was brought to a temporary standstill by a heavy rain and snow storm, totalling .94 inches, Wednesday night.

Temperature: max., 90; min., 30; prec., 1.03 inches.

Judith Basin:

Over an inch of rain fell on the 7th. and 8th. and was very welcome to the farmers of the Judith Basin. Cool cloudy weather has prevailed during the greater part of the week. Max. temp., 58; min., 26; prec., 1.09 in.; evap., .860 in.

Judith Basin, cont'd:

The early part of the week was spent in planting potatoes. The ground h has been too wet for field work since Tuesday.

Mr. Woodwrad, of the Forage Crop Investigation Office, has been at this station since May 6th. to look after forage crop work.

Lawton:

A wide range of temperature has prevailed during the past week. The maximum temperature on the 6, 7, 8, and 9th was 92, 98, 101 and 97 respectively. During the afternoon of the 8th and 9th, the south west wind was pretty hot and small grain throughout this part of the country was seriously damaged. Truck crops of all kinds wilted badly during the four days of hot weather. Prospects for wheat and oats are exceedingly poor at the present time. A good many are of the opinion that oats will not be tall enough to cut with a mowing machine and are using the crop for pasture.

Onthe evening of th 9th. the temperature dropped 51 degrees, finally resulting in a rain of 55" on the 11th. At the present time a chilly wind from the north prevailed.

Corn has made some growth during the past ten days and looks fairly well now.

All of the cotton, kafir, corn, Milo, feterita and cow peas were planted in the permanent rotation plats during the week. All of these crops seem to be germinating rapidly. Milo shows a good stand , and the other crops are just emerging. Grain sorghums and cowpeas in the cooperative projects were planted during the week. The cotton project will be planted within a couple of days and the increase fields of kafir and cowpeas will be seeded as rapidly as possible.

Weeds are giving as much, if not more, trouble than they have any time in the past. All manured plats are very weedy and will have to be cultivated immediately.

Mandan:

Horticultural Department.

Miscellaneous odds and ends were transplanted. A double Caragana hedge was planted on three sides of the vegetable manuring experiment. Some additional nursery stock was lined out.

Seed beds were watered preparatory to the germination of fruit seeds.

Several additional sample hedges were planted and the older ones filled in.

Considerable replanting of shrub abd trees was done on the grounds.

This year's plantings were cultivated and put into shape.

A good variety of plants are in bloom this week.

The soil moisture determinations on the main windbreak have been completed and those on the hillside orchard have been begun.

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Mandan, cont'd:

Agronomy.

Weather for the past week has been cold and disagreeable for field work, however, small grains have made fair progress.

Sunflowers and hemp were seeded the fore part of the week for the Office of Drug and Poisonous Plant Investigations.

Spring plowing for corn in the rotations was completed the latter part of the week.

About four acres of alfalfa, brome and wheat grass have been seeded with barley as a nurse crop.

Mr. M. L. Wilson, State Leader for County Agents for Montana, was here during the week.

Mr. J. M. Hammerly, of the Office of Corn Investigations, was here again to look after another date of planting of corn.

Mr. John Brinsmade, of the Office of Cereal Investigations, in charge of the flax work at this point, has gone to the Northern part of the state to assist County Agents in an effort to increase the flax acreage.

Max. temp., 91; min., 33; prec., .05.

Cooperative Grazing Experiment.

Owing to the bad weather and the time required to put the branding shute and corrals in shape it was impossible to divide and weigh the cattle the latter part of the week.

The well machine was moved in and work on repairing the deep well will start at once.

Arboriculture.

Planting of cuttings and tree seed was finished on the 8th. About 270,000 cuttings of willow and poplar were put in for shipment next spring to cooperators.

Making the conifer seed-beds and planting the seed was begun but discontinued till the 10th on account of the high wind. These were finished on the 11th and are as follows: 6 beds of Jack Pine, 4 beds of Western Yellow Pine, 10 beds of Black Hills Spruce, 2 beds of White Spruce from Northern Canada and 2 beds of Lodgepole Pine. These will be left in the seedbeds for two years, transplanted to the field for 2 or 3 years and shipped out to cooperators after this time.

This completes our planting work for this season and the work that follows will consist of cultivation and summer fallowing.

Work has begun in the Office on the inspection sheets and route maps for the summer, numbering about 1150.

North Platte:

From the 5th.to 8th.inclusive high temperatures prevailed. On all of these days the temperatures went above 85, and 90 was reached on the 8th. On the 9th. the weather suddenly turned much colder. A light skiff of snow fell

North Platte, cont'd:

during the day and the minimum temperature was 30 degrees. High winds, low temperatures, and threatning weather have prevailed since. Prec., .10.

Corn planting on the D. L. A. plats will be finished today.

Sheridan:

Weather for the past week was as follows: Max., 86 on the 5th.; min., 28 on the 10th; ave.wind vel., 5.1 mi.; evap., .921 in; prec., 1.69 in. On the night of the 8th. the heaviest continuous rainfall since that station was started fell -- 1.10 in fell during the night and .18 fell as snow the following day.

No seeding was done during the week, but preparation of land for corn and forage crops was in progress during as much of the week as we could work in the field. One day of plowing was done on the rotation corn plats, but it turned over poorly, even though it had been about 6 days since the last rain. The teams are again plowing on some of the lighter soil for corn, and it is turning over very well.

A pipe line has been laid and connected to the water system, which will conduct water to a tank in a pasture we have rented adjacent to the station.

The boxelder trees in the Shelterbelt came into leaf this week, and Willows, Chinese elm and poplar are nearly to a leaving stage, American elm are somewhat slower.

Winter rye on the station has 4 leaves now, and will soon begin to joint. Winter wheat is making a slower growth, but looks very good. Reports from the farms that are winter crops came through the winter in fine shape, and that alfalfa killed less this winter than for some time.

Land was broken during the week for what is to be the fruit and bush fruit orchard. The first round of soil samples were finished during the past week.

Tucumcari:

We have had much windy weather during the week and there was some soill blowing at times. Temperatures have been favorable to plant growth, and there is moisture enough in the soil to keep what vegetation that has already started growth going in good shape. Peaches and plums in the station orchard are making a very rapid growth. Shade trees are also doing well, and much of the shrubbery set out in March is beginning to start growth. The second planting of sorghums in the date work was made on May 4. The M.C. Corn plats were planted on May 6th. The surface soil is now dry to a depth of about 5 inches and the disc furrow openers were used for the above mentioned planting. The remainder of the hog pasture lots were plowed; also the late spring plowing on the plat field, including the fallow plats. Manure was also applied to plat "C" of Rotation 272 and 273 at the rate of 30 tons per acre. The first round of soil samples for the season were taken on the M.C. spring wheat and corn plats. Below the first foot, except on fallows, the soil is very dry and it is difficult to sample.

Tucumcari, cont'd:

Maximum temperature for week, 89; min., 38; wind velocity, 11.6 mi.; evap., 3.082"; prec., none; Prevailing wind direction, S. W. Sky, clear.

Williston:

Weather for the week has been rather cool, and high winds have prevailed. A heavy, beating rain of .48 inch came down in about 15 minutes on the evening of the 6th, accompanied with some hail, but no damage was done.

Crops are all doing well, have emerged, and are making a good root. Flaxes were seeded on May 6th, and land for corn plowed on May 9th. The grasses seeded in rotations 10 and 12, and the sweet clover seeded in rotation 31 last year failed to make a catch owing to dry weather, and were reseeded on the plats this week.

Mr. Brinsmade, of the Mandan Station, visited here today, being in this locality in the interests of increased production of flax.

Woodward:

The fore part of the week was hot and windy, the latter part cold and cloudy. On Wednesday the 8th, we had the first hot wind of the season, the temperature getting to 101. The hot wind began about 11 a.m., and lasted until about 6 p.m. The hot days were accompanied by hard winds. It looks as if it might storm now at any time. A good rain at this time is in demand. Some of the wheat is suffering for rain.

There was no planting done on the D. L. A.plats this week, but the broom-corn, on account of the weather. Planting was done on the increase fields instead. Kafir and milo that were planted early in the Cereal block have made a very poor germination. Only a few of the milo seeds germinated and practically no kafir. The broom-corn and sorgo that was planted at the same time came up to a fair stand, some is still emerging.

Max. temp., 101; min., 38; average hourly wind velocity, 9.0 mi.; evap., 1.939 in.; prec., 0.05 in.

NOTE.

Attention is invited to the attached copy of memorandum, herewith, from the Chief Clerk, Department of Agriculture.

LIBRARY
PLANT

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

MAY 18

REPORT FOR WEEK ENDING MAY 18, 1918.
(Except where otherwise indicated).

Amarillo:

Continued drouth marks the weather for the week. High summerlike temperatures seem now to have become established along with high winds and lack of rainfall, and the prospects are decidedly discouraging. The small grains except on last year fallow land and early fall plowed ground which stored moisture from last August and September rains, is fast dying out. On plats where these crops are still holding up the wheat and oast are the only ones about 4 inches high and have not yet commenced jointing. All field work is at a standstill. First date of planting for sorghums in Cereal work was done a week ago but no further planting of row crops will be attempted until it rains. Corn planted the first of the month is not showing a blade anywhere on the nine plats involved. Grass over the praries is dead and much stock is being shipped out of the country, the railroads in this part of the country being rushed with this work at the present time. It is stated that grass land for pasture now rents at $1 per head of stock, where formerly 50¢ per head per month was the regular rate.

Mr. B. B. Holland, local county agent, and Mr. J. R. Edmond, District Agent, were visitors at the station last Monday. Mr. Holland has been called under the draft and will leave for the training camp shortly. His place as county agent will then be vacant with no one at present in sight to fill it.

Weather for the week was as follows--max.temp.,90 on the 17th; min., 37 on the 11th; hourly wind, 13.4 miles. On the fifteenth we had an average hourly wind velocity for the day of 23.7 miles from the south. It is blowing a gale from the S.W. today. Precipitation, .12 in. on the 11th;evap., 2.377 inches.

Archer:

All the spring grain and the peas on the D. L. A. plats are up and looking good. The corn was planted on the 16th and 17th. The seed used was a mixture of that saved from 1916 and 1917. Not enough of 1916 seed was saved from last year to plant all the plats, so an ear test was made of some of the 1917 crop which was frozen before all of it became mature. Out of 300 ears, only 48 were found with a germination percent high enough for seed. The corn was planted thicker than if only 1916 seed had been used, and will be thinned if too thick when it comes up. Seed corn for silage was ordered from South Dakota and will be planted as soon as it comes. The plats of rotations 41 and 42 were seeded to brome grass and alfalfa. The ground is being prepared for flax which will be seeded the first of next week.

The weather for the entire week has favored field work, as it has been fair and warm and the winds have been moderate. The maximum temperature of the week, and also of the season thus far, was 80 on the 15th, minimum, 28 on the 12th, means 67 and 38. Precipitation, 0.02. Evaporation, 1.492. Average hourly wind velocity, 8.4 miles per hour.

Ardmore:

Maximum temperature for the week, 83; minimum, 36; precipitation, .06 inch.

Ardmore, cont'd:

The weather during the week has been very favorable for farming operations and the growth of crops. There is an abundance of moisture. Spring wheat and oats are looking good. Corn planted on the 7th has just emerged through the ground. Corn planting on the station will be completed within a few days. About eight acres of corn will be planted this season, together with a like acreage of Dakota Amber sorgo.

Mr. J. M. Stephens visited the station on May 18th.

Bellefourche:

All corn on the dry land rotations was planted on the 14th. Both spring and fall plowed plats were in good condition at time of planting.

Alfalfa has already commenced to suffer from lack of moisture. The precipitation for the season to date is about normal; but the alfalfa has reached a more advanced stage of growth than it usually reaches at this time. Small grains will not suffer for several weeks, even if no rain falls.

Conditions on the range country surrounding this project are excellent. The grass has made much more growth than it usually has at this season, and so far it has shown no signs of needing more moisture.

Colby:

The week has been dry and very windy. On Wednesday a heavy south wind, averaging 29.9 miles for the 24 hours, caused considerable soil blowing. Rye is heading but needs moisture. The other grains are not suffering much as yet. A rain would be very welcome. The corn is coming up nicely.

Weather for the week:-Max. temp., 89; min., 43; average hourly wind vel., 10.9 mi.(8'), 15.9 mi.;evaporation, 2.150; precipitation, 0.

Dalhart:

The extremely hot weather which occurdd during the latter part of last week was followed up with a good rain last Saturday night and the weather has been cool since that time. Field work has been in progress during the entire week and all of the plowing, with the exception of a few plats that will be fallowed, has been completed. All of the corn and the earlier dates of seeding for the grain and forage sirghum date tests, as well as some sudan grass, has been seeded. To date there has been but very little seeding done among the farmers, as they gain in experience by the method of later seeding. June 1st has been set as the best date of seeding by popular opinion and the tendancy is to wait until that date and avoid reseeding if possible.

Maximum temperature for the week, 89; minimum, 35; prec., 1.31.

Edgeley:

The weather during the month of April was very unfavorable for sowing small grain. Cold freezing weather continued throughout the first half of the month. The ground was frozen hard during most of the forenoons. High winds occuring almost every day caused the soil to blow badly. The heavy

Edgeley, cont'd:

dust storms made it practically impossible to line out the plots and sow the grain. All the land was prepared for sowing by the tenth of the month, but seeding was delayed until the 18th. on account of unfavorable weather conditions mentioned. A heavy rain occured on April 16th. which made it possible to work the land down well. Previous to this rain the soil was in very poor physical condition, dry and cloddy. The seeding of all small grains was completed on April 22nd. Corn planting was completed on May 18.

Heavy frosts occuring after the grain was up caused some damage to the young plants, especialy in oats and barley. The barley has a yellow unthrifty appearance.

The rainfall for the month of April was 2.64 inches which is .76 inch above normal.

Garden City:

The past week has been very warm with three successive days of exceptional high wind movement. The average wind velocity for the twenty four hour period beginnign Wednesday morning at 7:30 o'clock and ending at the same hour Thursday morning was 28 miles per hour for the 8' anemometer and 20.8 miles per hour for the 2' anemometer. This high wind movement, together with the high temperature prevailing, has been very severe on the growing crops. Many plats of small grain are turning yellow, barley suffering most of all.

Fall plowed plats were disced, fall listed plats were leveled and spring listing was done during the week.

It was the intention to plant corn and the sorghums this week and next, but there is not sufficient moisture in the soil at the present time to warrant planting.

Maximum temperature, 91; minimum, 38; average hourly wind velocity, (8' anemometer) 16.8 miles; (2' anemometer) 11.9 miles; evaporation, 2.472 inches; precipitation, .02".

Judith Basin:

Cloudy weather has prevailed here during the past week, and showers occured on the 14th and 18th. Maximum temperature, 70; minimum, 29; precipitation, .29 in.; evap., 1.040.

Potatoe planting was finished on May 7th, and the remainder of the week was spent in planting trees for the experimental shelterbelts, and doing odd jobs. Weather conditions were ideal for tree planting, so a good stand is hoped for. Some extra ash and willow trees were planted along the creek that runs through the north pasture.

Spring grains are coming up on the rotations now, and weeds are aslo beginning to grow quite rapidly. Some fanweed is coming up on the winter wheat c.c. Series, and this will be pulled and burned.

Mr. Woodward, of the Forage Crop Office, completed his work here and returned to Havre on the 17th.

Mr. J. M. Stephens arrived here on the 18th. and expects to leave for Havre today.

Havre:

Weather during the past week has been cool and windy with no precipitation. On Thursday there were a few flurries of snow but not enough to moisten the surface. On the night of the 16th the minimum was 23, but with the dry condition of the air there was no noticeable damage to field crops, with the exception of alfalfa which was wilted for a day or so.

Corn on the rotations was seeded on the 14th, and 15th. 30 acres of land are now being backset for corn. This was plowed from native sod in 1916 and was seeded for a crop in 1917. At present time this land is dry to a depth of from 3 to 5 inches, which makes it a good job of plowing difficult.

Spring crops were seeded early and are still growing, but some fields in the localtiy that were seeded late have not germinated. Rain wouls be of material benefit to crops in this locatity as well as cheer the minds of many farmers.

Mr. Woodward, who has charge of the work of the Office of Forage Crop Investigations here, returned on the 19th from Moccasin, where he has spent the last few days attending to the planting at that place.

Hettinger;report for week ending May 11:

All crops are growing rapidly in this locality. The grain on the Dry Land Plats is looking very well. The soil is getting somewhat dry, but the crops are not suffering any as yet. We have been busy plowing the Dry Land Plats the past week for corn, and getting them ready for planting.

Huntley:

Corn on all of the Dry Land project was planted during the week. About eight acres of corn and an acre of sunflowers were planted for silage Ground used for this purpose was sod land broken last fall. Potatoes for the variety test and mulching experiments were planted Monday.

Spring sown alfalfa, sweet clover and brome grass are up with apparently good stands on all plats. All crops are making rapid growth, especially winter wheat and rye which are beginning to joint. The work of trimming the plats preparatory to grading the roads is now in progress.

Temperatures for the week:max., 80; min., 32; prec., .26.

Lawton:

Crops have enjoyed rather favorable weather during the past week. Temperatures have been moderate and the wind movement has not been brisk except on one day. Precipitation amounting to 0.64" fell on the 17th. Since that time the weather has been more or less cloudy and crops have done well as could be expected with only a limited amount of surface moisture. Corn has made good growth and wheat is beginning to head. Oats is so short that heading will not be a very important feature in its development. A few scattering heads are observed on some of the plats.

Excellent stands of cotton and all of the sorghums and cow peas that were planted within the last two weeks have been obtained. Broom corn on

Lawton, cont'd:

the M.C. plats was replanted on the 14th. Planting of corn in the cooperative experiments has been delayed on account of the delayed shipment of seed from Texas. This delay is caused by the necessary arrangements that must be made due to an embargo preventing the shipment of Texas seed into Oklahoma.

Weeds continue to grow and give nearly all of the plats and fields a very rough appearance. Had these weeds been destroyed previous to planting there would not have been sufficient surface moisture to insure germination. As a result of this condition furrow openers were used on the planter. This enabled us to place the seed in a clean row and in sufficient moisture to bring forth rapid germination. Cultivators will be started this week and continue until the crops are cleaned up.

Immediately following the rain of 0.64" the sod roads in the permanent rotation field were broken and one drill of sorghum seeded in each road. It is barely possible that this cane can be used as a chinch bug trap.

Madden:

Horticulture.

Six new species of blocks were planted including three species of oaks.

The planting of the self protecting combination fruit patch was completed. This planting consists of 18 rows of tree and bush fruits. The rows are 8 feet apart and the small fruits alternate with the tree fruits by rows. All plants, trees included, were cut down to short stumps for the purpose of growing all the plants in low bush or dwarf form. Summer pinching of twigs is to replace the usual pruning methods. The four rows on the west consist of native fruits closely spaced, thus soon affording wind protection. Corn or dwarf milo is to be planted between the rows which is leaft all winter to hold snow. Plants are spaced 4 or 6 feet in the row.

A small number of trees in the plum variety orchard that have survived the winter were in bloom this week. There was no blossoms on any of the apples or crabs. The severe freezes of May 12 killed alarge number of flowers in the seedling plum orchard. A few fruits, however, set in.

The potatoe experimental plantings were put in May 13 and 14. There are 15 varieties in the variety trials. Four varieties are employed in the spacing experiment and in hill selection work. About 4 acres were planted in all. The medium early vegetables were planted. There was considerable routine work in the greenhouse and hot beds. Asparagus and rhubarb are giving bountiful yields.

Work on the grounds consisted in defining road lines, trimming lawn edges and spading up among the groups of trees and shrubs.

A number of apples and plums were planted in the group breeding orchard. These groups consist of from 5 to 7 trees each and the trees are to be trained to the dwarf bush type.

Some hybridizing was done on native crataegus trees. Pollen of pear and quince were used. About 30 pots of hardy fruit parents were planted for future use in greenhouse hybridizing work. In the greenhouse the apricots, raspberries and some cherries are ripening. These are all hand crosses.

Mandan, cont'd:

The spring soil moisture work was completed May 17 just four weeks being required to take this batch of samples. The same plats will be gone over again in July and in October.

All the seed beds, consisting of seven beds, each 4 feet wide and 200 feet long were watered and raked to facilitate the growth of the seedlings which are coming up very satisfactorily.

A few newly received items of nursery stock were lined out in nursery rows including 1000 additional plum seedlings for August budding.

Two men spent one entire day going thru all the plantings destroying webb worms nests and picking cocoons of various moths and butterflies. A largg number of young webb worms were removed and over 1 peck of cocoons were collected and burned.

Considerable time must be spent now in preparing blank tables for recording the seasonal data for all plants under observation. The first set of noted in the field are taken beginning June 1 when the winter injury noted are taken and stand counts are made on all plantings.

Mr. J. M. Stephens left the fore part of the week to visit several of the stations in the Northern District.

Agronomy.

Land was prepared the fore part of the week for the planting of corn.

Alfalfa and Brome grass in rows were given the second cultivation for the season.

An addition to the south field of approximately two acres has been broken and seeded to flax which the Vereal Office wished to increase at this point.

Bulk planting of corn started today. Corn will be planted in the rotations the fore part of the week if the weather permits.

On the night of the 11th the temperature dropped to 23 degrees. Small grain was severely injured. It was hit much harder in the South field than in the other fields on the station. Barley especially was frozen to the groung while wheat and oats were badly frozen but not as severely as the barley. Grain, however, has recovered remarkably the past few days. Flax apparently was not injured. Alfalfa which was just coming up does not appear to be injured to any extent at this time. Max. temp. 85, min. temp. 23, precip. .13.

Cooperative grazing experiment.

The cattle were divided, weighed and branded the fore part of the week. They are now in their various pastures. The average weight of cattle for each pasture is approximately 7,000 at the beginning of the experiment.

Arboriculture

The field work this past week has consisted of disking the summer fallow in field "p" and cultivating conifer transplants in field "o".

Mandan, Cont'd:

The two freezes of the past week have quite seriously damaged the box-elder and ash seedlings that were planted last fall and were up two inches.

Office work is continuing on the making up of this year's inspection and route maps accompanying them.

North Platte:

Another rainless week has past. Near hot winds gave blown for four days. Winter wheat on continuously cropped land is beginning to fire where the stands are thick. Corn planting on the station will be finished within a few days. Max. temp. 90, min. temp. 38, precip. 0.

Scottsbluff:

The week continued quite windy but only a trace of precipitation was recorded. The rains of the previous week however have supplied sufficient moisture and all of the spring grains are up and doing nicely. The week was spent in preparing the ground and planting the corn plats. The ground however is in excellent condition and only the spring tooth harrow was used on the fall plowed plats. The alfalfa and clover plats which were seeded this spring before the rains, were rolled with the corrugated roller to break the crust which had formed and would not allow the plants to emerge.

The apparatus for recording the hourly wind velocity was set up and the keeping of records begun. Max. temp. 87, min. 37, precip. T, evap. 1.270.

Sheridan:

The weather for the past week has been as follows: Max. 80, min. 31, evaporation .883, precip. .18, and average wind velocity 5.5 miles.

The past week has been favorable for field work, and all of the corn land on the station is now ready for seeding. Corn on rotations is being planted today as well as the flax. Land is also being prepared today for the forage field.

The garden has been planted, and one date of planting potatoes, as well as a date of seeding wheat, oats and barley. Flax varieties in the Cereal Fieldcare also planted. All of the wheat, oats and barley, excepting a date of seeding, are now up, and generally the stands are good, but in a few places where apoor seed bed was prepared, they are spotted.

Trees are making rapid development in leaving out, with the exception of the willows, many of which seem to have frozen back, and others to winterkill.

Today we found winter rye heads in the boot(that is, at the bottom of the boot) and all of it is jointing. Winter wheat is not so far along, but looks very good on the station, which is true of the whole section here.

Mr. John M. Stephesn, of our office, E. F. Burton, Dairy Demonstrator, of the Extension Service of this state, Daniel E. Willard, Development Agent of the Northern Pacific, and Mr. Thomas, County Agent of this county, visited this station on the 16th.

Woodward:

We have had another disagreeable week but we managed to get all of the main planting done. Everything was in readiness by Wednedday morning so the planting was begun. It has been terribly windy but we have had no blowouts on the station. The variety and most of the rate and date plantings are completed on the Cereal schedule, and some of the crops are coming up. The broom corn that was planted the 8th on the M.C. Series is up to a good stand. Corn is growing pretty well considering the weather we have had. Rye and wheat are both in full head, althe the rye is further advanced than the wheat.

We are very much in need of rain as the wheat is suffering and has been for some time. It is burning in spots and looks as if it would burn before very long if this weather keeps up. It has been trying to rain now for over a week but without success. Last Saturday about 7 p.m. we got a hail storm, the hhil ranging in size from 3.8 to 1/2 inch. It fell pretty thick for a few minutes but it did not seem to do very much damage. Some of the fruit was killed by it but there still remains plenty as some of it was set on to thickly. A rain followed the hail immediately but the whole amounted to only .32 of an inch. Thursday night of this week we got another small rain amounting to .12 of an inch.

Weather report: max. temp. 83, min. 44, evap. 1.889 inches, average hourly wind velocity 11.0 miles, precip. .44 inches.

JUN

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

MAY 25

REPORT FOR WEEK ENDING MAY 25, 1918.
(Except where otherwise indicated).

Akron:

The past week has been very warm and dry. Corn varieties and millet varieties were planted. Winter rye is heading and corn on the rotations is coming up. Spring grain looks well and has made a fairly good growth. Winter wheat on the Station is not suffering for moisture yet except on the subsoiled and fall plowed plats. The subsoiled plat is burned badly. Much of the winter wheat in this county is burning rapidly, especially that that was sown in stubble. Some that was sown on summer fallow is in good condition but nearly all of it is too thick. Unless we have rains soon there will be a very short crop. We have had only 0.22 inches precipitation this month.

Maximum temperature for the week, 86; minimum, 38; prec., 0.

Amarillo:

Another dry week has been added to our list, but a thunder shower last night gave us .13 in. of rain and it is clouding around today looking more promising for rain, than it has for some time, so we are in hopes by another week we shall be able to report a change for the better. Wheat and oats are damaged beyond recovery altho wheat on the B and C platts CC series has held up remarkably well and has commenced to form stalks.

Some of the plats were disced for weeds that were coming on during the week. Some work with soil sampling has bee done. A kitchen is being built onto the teamsters cottage.

Weather for the week was -- Max., 95 on the 24th; min., 51 on the 19th; Hourly wind, 11.3 miles; prec., .13 in.; evap., 3.100 inches.

Archer:

The entire week has been favorable for field work. Small grain and grass have made a very good growth this week. Potatoes were planted the first of the week. Flax on the D. L. A. plats was seeded Thursday. All the summer fallow plats, except plat O of the fallow methods, were plowed. The trees on the station were given a thourough cultivation. Some of the larger trees died after starting leaves this spring. There is plenty of moisture in the ground, but the surface is getting quite dry and a good rain would be beneficial to the late plowing.

Maximum temperature, 79 on the 24th; min., 31 on the 19th; means, 71 and 39; average wind, 8.6 miles; prec., 0.16; evap., 1.559 inches.

Ardmore:

Max. temp. for the week, 81; min., 37; prec., .99 inch. The early part of the week was warm and favorable for farming operations and the growth of crops. The rainfall which was recorded today (25th) was needed. Prospects are now good. Small grain is doing especially well.

The planting of corn on this station is practically finished, and about 25 acres of Dakota Amber sorgo has been planted. Fifty acres of the latter

Ardmore, cont'd:

crop are yet to be planted.

The dairy herd was tuberculin tested during the week. One pure bred cow developed typical reaction and was posted on the farm. The meat was passed for food.

Big Spring: Report for week ending May 18:

Maximum temperature, 92; minimum, 47; evap., 2.64; wind vel., 8.4 mi., prec., .40 inch. The week was rather cool for this time of year. The shower received, while light at the farm, was much heavier over a large scope of the county to the north of us. This rain will probably enable us to begin planting next week.

Report for week ending May 25:

The shower received the latter part of the previous week wet the soil sufficiently to warrant us in starting planting, and take a change on getting a stand. The soil samples show that most of our moisture is in the first 18 inches of soil. Beginning on Monday the 20th, two planters were started and by the end of the week we succeeded in getting the rotations and c.c.plats planted and quite a block of the variety testing work. Plats planted to milo the first part of the week are showing a fair stand with this crop. Sorghums, kafir and feterita are also emerging and we are hopeful of getting a stand with these crops on most of the plats planted. The plats planted to cotton will be rather doubtful whether we secure a stand with this crop as there has been a high wind movement most of the week, which has dried out the surface soil very rapidly where disturbed.

Max. temp. for the period, 95; min., 68; evap., 2.88; wind vel., 9.8 miles precipitation, none. Quite an acreage has been planted throughout the county this week and much trouble is being experienced from soil blowing. A number of the farms planted have "blowed out" and the crops will have to be replanted.

Colby:

One more dry and windy week. The effect of the long dry spell is becoming very noticeable. Many of the wheat fields have dried up almost beyond recovery. All the plats on the station have begun to suffer the summer fallowed the least, while the one stubbled in is practically gone. Corn is up to a good stand. The sorghums were planted during the week. The ground was still very moist for listing.

Weather for the week- max.temp., 91; min., 45; ave.wind (8') 15.6 mi; (2') 10.8 mi.; evap., 1.560; prec., .04".

Dalhart:

All of the plowing was completed during the first part of the week and all but a small portion of the entire farm has been put in condition for seeding. Several acres and plots of forage and grain sorghums were seeded

Dalhart, cont'd:

during the last part of the week. Fifty two one hundreths of an inch of rain fell this afternoon and was accompanied by considerable hail. And unless this is followed by some wet weather for a few days, which is unlikely, it is probable that the ground will crust over to such an extent that the sorghums will not get through and will have to be reseeded.

Maximum temperature for the week, 99; minimum, 48; maximum wind velocity, 12.8 miles. Precipitation, .74 inches.

Garden City:

The past week has been warm and windy and spring grain is rapidly drying up. Barley, with the possible exception of plat "C" of the MC series, is beyond recovery. Many plats of spring wheat are also badly burned.

Field work for the week consisted of plat trimming, cultivation of roadways and alleys between plats. Many plats, not planted as yet, were also cultivated to kill Russian thistle and other weeds that are starting a most vigourous growth since warm weather has come.

Two plats of potatoes planted on the 26th of April are up to a fair stand.

The farmers in the irrigated section of the surrounding country will cut their first crop of alfalfa during the coming week.

Maximum temperature, 97; minimum, 49; evaporation, 2.732; precipitation, .12"; wind velocity (8' anemometer) 18 miles per hour; (2' anemometer) 12.7 miles per hour.

Havre:

The week has been cold and windy with a trace of precipitation. Conditions are beginning to be rather severe. Spring grains are still growing some, but seem to have nearly reached the limit. Rye is well headed and winter wheat is in the boot. Some of the flax seeded on spring plowing will undoubtedly be a poor stand due to the fact that so much of it has started growth and died. Stand of flax on corn land are very good.

Until last night there has been no precipitation this month that could be measured in the rain gauge. There has only been one shower since the snow melted and that amounted to only .29".

Hettinger:

Have had some splendid showers the past week, thus putting the soil in excellent condition. The crops on the Dry Land Plats are good.

All trees and shrubbery on the station are in good condition and the indications are that they will make a rapid growth this season.

The past week was spent in sowing alfalfa, planting potatoe varieties and doing general farm work.

Mr. J. M. Stephens, of the Northern Great Plains Field Station, at Mandan, North Dakota, was here Friday May 24th, to inspect the crops on the Dry Land Rotations.

Weather for the week; max., 68; min., 40; prec., .69".

Huntley:

Though the weather has been generally cool during the week, crops have made good growth. Early planted vegetables in the dry-land garden are up with a fair stand. Bean planting is in progress. The plats devoted to a comparision of cultural methods were seeded yesterday, and the bean varieties will be planted as soon as possible.

A round of soil samples taken early in the week shows the upper two feet of soil to be filled with moisture. Practically all the plats were sampled, with the exception of those fallowed last year, are dry in the 4th foot. Fallowed plats all show some moisture in the fifth foot.

Temperatures for the week: max., 78; min., 32; prec., .29 inches.

Mandan:

Horticulture.

Considerable grubbing has been done in the 1914 nursery. All trees that suffered severe winter injury or canker injury are removed and burned.

The strawberry variety plats were planted with plants from the older plats. There was a high percentage of winter injury. Manure was spread in the variety orchards preparatory to plowing. Some additional apple trees on Pyrus baccata roots were planted.

Severe sand storms are doing much damage to vegetables that are up.

The heeling grounds have been leveled off and all vacant strips in E.I. have been manured and plowed.

Considerable additional plantings of vegetables were made. Some plants from the hot beds have been moved into the field.

The week was largely spent in the office in preparing the season's blank tables for recording field data. The spring noted on stands and winter injury are taken beginning June 1st.

Some outside hybridizing was done on native Crataegus. The apricot crosses in the greenhouse have ripened and were picked.

Agronomy.

The past week has been rainy and cool. Field work was delayed about a day and a half the fore part of the week on account of the rain. We have now had about three times the rain during this month that we had during the same time last year. Ground is now in very good condition for growing crops.

Corn was planted in the rotations on the 22nd and variety tests for the Office of Corn Investigations was planted on the 23rd. Practically all the seeding that remains to be done on the station is the annual forage crops for the Office of Alkali and Drought Resistant Plant Investigations.

The plats have been lined up and are ready to be trimmed.

Mr. John Brinsmade of the Office of Cereal Investigations has returned from the western part of the state on the 23rd. He has been away for the past two weeks aiding County Agents in a campaign for the increase of the flax acreage in western North Dakota.

The station force raised $72.00 for the benefit of the second Red Cross War Fund.

Max. temp., 75; min., 29; prec., .87".

Mandan, cont'd:

Cooperative Grazing Experiment.

Work is progressing in a satisfactory manner on the increase of the depth of the well in the pasture. The rain of the past week has been of benefit to the native grass and the conditions of the pastures have improved and they are now furnishing an abundance of green feed. The cattle in the various pastures are improving in condition.

North Platte:

There has been but little change in crop conditions during the week. Two showers of .30 and .10 relieved conditions temporarily, but the grain fields are very dry and unless rain comes soon the crop will be injured beyond recovery. The grain fields are full of thistles and without moisture the grain is unable to gain a lead. Corn is practically all up on the station with good stands.

Mr. W. W. Burr visited the station during the week.

Scottsbluff:

Cool damp weather, very unfavorable to plant growth, has prevailed the greater part of the week. A slight hail storm on May 23rd, did little or no damage to growing crops on the station, but reports from other localities in the valley indicate more serious damage.

Field peas are up and also flax. but clover and alfalfa, seeded at practically the same time, have not yet emerged.

Max. temp., 81; min., 37; prec., .47"; evap., 1.673".

Sheridan:

Field work has progressed in a very satisfactory manner the past week, as the weather has been clear most of the time, and the soil in good condition to work. The fore part of the week was cool and the latter part rather warm for this season of the year, in this section.

Grass in the pastures and on the ranges see s considerable ahead of its condition last year on this date, even though the spring has been very adverse for field work.

All of the corn planting was finished, as well as the planting of sorghum and potatoes, during the past week. Some work has also been done on the garden. Discing, harrowing and floating was done on the land planted to sorghum, and sod land which was plowed for additional tree work.

Spring grains are making a rapid growth, although the stands on a few plats on both the Cereal and Rotation Fields are somewhat uneven. The poor stand on rotation plats was due to a poorly prepared bed, while those on the Cereal field were due to poor germination. Stand counts have been taken during the week on all plats of the Cereal field.

Work has been begun on enlarging the basements under the Mess House and the Superintendent's Residence, in order to make room for the storage of coal in quantity, and to keep it from "slacking" in storage , which the

Sheridan, cont'd:

coal in this section does badly.

Winter rye is making a surprising growth, as the heads are now very close tothe "top of the boot" and will be heading in a very few days.

The weather conditions for the past week have been as follows:- max., temp,, 84 on the 25th; min., 35, on the 22nd; prec., .50 in.; evap., 1.311 ave.wind vel., 5.5 mi. per hour.

Tucumcari:

The weather continues dry and very windy. We have had only .17" of an inch of rain to date this month and farmers and stockmen are beginning to become alarmed. The last few days have been showery but no precipitation of importance has been received in this immediate territory, and the station has been missed altogether. Some of the earlier planted sorghums in the date work have emerged but the stands are being thinned out by the hotp dry weather and drifting sand in some spots. The third planting in the sorghum date work was made on the 15th. No more planting will now be done until we get a good rain. Field work for the past two weeks has consisted principally of plowing and killing weeds. When a rain does come we will be in shape to make good use of it. We have let the weeds grow on the unplowed plats in the experimental field to prevent soil blowing. This has been somewhat effective as is evidenced by a large sand pile made by drifting sand from the plat field now being greatly diminished in size. The windmill, which was taken down some time ago,for repairs, was put in shape again last week. Two rounds of soil sampling have been made on the M.C. Corn and Spring Wheat plats since last report.

Germination testsnhave been made on all seed which we will use on the station. The percentage of germination on some of this seed was very low.

Maximum temperature for the week ending May 25th, 93; min., 50; wind velocity, 11.1 miles; evap., 2.760"; prec., T.

Williston:

Weather for the week has been favorable to crop growth, although somewhat cool. Precipitation, .53 inch on Tuesday, and .16 this morning, with rain practically all day. The outlook is splendid at present.

All grains doing well, and are well stocled owing to the large amount of cool weather. Flax is up, and with a few days of warm weather the corn will soon emerge.

Mr. J. M. Stephens, Superintendent of the Northern Great Plains Field Station, at Mandan, North Dakota, was a visitor on this station Wednesday, May 22nd.

Woodward:

This has been one of the hardest weeks on crops that we have had. Most of the time the wind has been blowing hard all day and night, and all the time it has blown hard either during the day and night. The ground is so

Woodward, cont'd:

dry and ashy in some places that it blows in spite of the cultivation. Wheat has suffered more the last week than all the rests of the time put together and if it does not rain very soon, some of the farmers say that they will have to cut it for hay and save what they can. In most cases with the farmers in their spring planting they have secured rather poor stands and some have had to replant, or will have to do so. Some of this poor stand is due to too early planting. There was plenty of moisture present when it was planted but the ground was too cold and the seed rotted in the ground.

All of the crops that we have planted are up, but the cowpeas on the rotations, and they will have to be planted. We have not planted the variety peas yet, but will do so as soon as we get a good rain. The cotton and the cowpeas were badly beaten by the blowing sand last night. These cowpeas were on the rotations 201, 202 and 203, where a good stand was secured. The wind blew directly from the west last night about two hours, from 12 m to 2 am. It averaged 18.5 miles for the 24 hours. The hard west wind caused considerable damage to some of the rowed crops, the cotton and cowpeas being affected most. These may come thru if we get a rain soon. The wind blew a wagon over that had a heavy rack on it, blowing the rack 100 feet from the wagon and tearing its sides and ends off. The rack was left in the middle of a plat. We had some rye cut for hay and in the windrow and this morning it was scattered all over the station.

Weather report: max.temp., 94; min., 57; ave.hourly wind vel., 14.1 mi.; evap., 2.470"; prec., 0.04"; we have been favored sometimes with the very best indications for a good rain but each time it blow over.

Bellefourche:

Favorable growing weather has prevailed during the whole week. Corn on fall plowed land emerged on the 25th. That on spring plowed land is not up yet.

Alfalfa is needing moisture and its growth has already been checked a little. All spring seeded crops still ahve enough moisture left in the soil to support growth for several weeks.

Clover winter-killed entirly and there is no live clover plant left on the plat. A few plants were still alive early this spring were so weakened that they finally succumbed.

Max.temp., 85; min., 31; prec., .18 inch.

Judith Basin:

A considerable amount of snow fell on the 24th and 25th, most of it melting as it fell into the soil. Weather conditions have been variable throughout the week, clear skies alternating with snow or rain, and clouds Maximum temp., 69; min., 28; prec., 1.07; evap., .563".

Most of the work at the station included seeding the alfalfa plat in Rot, 42 and the clover plat in Rot. 11. Fanweed found in the c.c.series, and in one of the alfalfa fields, was also pulled and burned. Some more ash

Judith Basin, cont'd:

and willow trees were planted along the creek bottom in the early part of the week. Garden planting has been completed, and some of the vegetables are up.

For a while it appeared that considerable damage would be caused by cutworms and stem maggots in the Judith Basin. However, recent reports of the County Agent gives the information that the damage has been slight, and that danger of serious injury from these pests is now past.

NOTE.

The following is quoted from a memorandum from Dr. W. A. Taylor, Chief of the Bureau, dated May 25, 1918.

> "In the development of the commercial vegetable seed marketing work, Professor Wheeler of the Bureau of Markets is endeavoring to locate commercial growers of such seed. This is necessary in order to be in position to secure war emergency reports from time to time as required in connection with inventories, acreages, etc. While a considerable portion of the production of these seeds is in fairly defined areas, the location of which is known, it is appreciated that new areas are continually developing and that a fairly continuous shifting of location of production is in progress. It has been suggested that if representatives of this bureau in the field learn of such areas, prompt reporting of them to Professor Wheeler will be helpful in the development of his work, and it is desired that our men cooperate with him in this matter. As your field activities are, to a considerable extent, in the most important vegetable seed growing regions of the country, will you kindly notify your field men in this respect."

Field men are requested to report to Professor Wheeler such information as they have or may learn from time to time.